PHILADELPHIA MEDICAL TIMES.

SATURDAY, AUGUST 21, 1875.

ORIGINAL COMMUNICATIONS.

PARACENTESIS THORACIS.

A Lecture before the Oxford, Pa., Medical Society,

BY JAMES TYSON, M.D.,

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PARACENTESIS of the chest is by no means a new operation, and I cannot, therefore, base the propriety of my detaining you with its consideration on any such assumption. It is not, however, so frequent an operation as it should be, and on this ground I may be justified in pointing out some of the indications for its more frequent performance, the simplicity of the operation itself, some of the instruments which have rendered the operation so easy and harmless, and, finally, one or two instances of the happy results derived from its use.

The object of the operation, as is well known, is to evacuate fluid, serous or purulent, from the chest by perforating the chest-wall, now invariably in an intercostal space, but formerly, also, by boring through a rib. It is, as stated, by no means a new operation, but was performed as far back as the era of Hippocrates, for the same objects as it is performed to-day, and with surprisingly little difference in the essentials of procedure. But, although it continued to be done from that remote era to the present, having, like transfusion, a varying popularity, we are indebted to the great French clinician Trousseau for establishing the operation on a sound basis. To his admirable work on clinical medicine I must also refer you for the details of its history, which is full of interest. Trousseau's first memoir on the subject, containing a report of three cases, was read to the Academy of Medicine in 1843. Two principles, at one time disputed, had, up to this date, been determined: first, that the fluid might be drawn rapidly from the chest without harm,—that is, all at one sitting, instead of a small quantity on successive days; and, secondly, that while it was desirable, as much as possible, to prevent the entrance of air into the chest, this was by no means absolutely necessary, as the chances of consequent injury were trifling. During this period, also, the trocar had come to be substituted for the bistoury; the trephining of the ribs had been omitted, and a variety of means had been suggested for plugging temporarily the external orifice of the canula.

I believe Trousseau has correctly assigned the reason for the unsettled position which paracentesis thoracis had attained among operations up to his own period. This cause* he states to arise from an "insufficient knowledge of the indications for operating, and not from any imperfection in the mode of performing the operation." He goes on to say, "It is impossible for any therapeutical means to be regarded with general favor, be it a medicine or surgical operation, unless it be suited to a determined exigency. A remedy will remain unemployed so long as the circumstances which demand its employment are unknown. Or at most, an experimentalist tries it at a time, in a sort of hap-hazard way, and announces a successful result; others who attempt to follow in the same direction either use the remedy too timidly or too indiscriminately, thus discrediting it and causing it to fall into oblivion. Such has been the fate of paracentesis of the chest."

Up to the beginning of the nineteenth century, the only evidences of fluid in the chest were the sounds produced by *succussion*, and the bulging of the intercostal spaces, although it was said by Mursinna, a German surgeon, in 1811, that a *dull* sound of a very peculiar character was sometimes heard on percussion. The same author, besides insisting upon the phenomena of succussion as absolutely essential to diagnosis, also said that œdema of the inferior extremities and of the scrotum was almost invariably present.

With the discovery of auscultation and the elaboration of its results and those of percussion by Laennec and his followers, the vagueness of information as to the presence of the condition requiring paracentesis of the chest passed away. But the distrustful, uncertain attitude of this very discoverer towards the operation was largely influential in preventing it from being properly appreciated until Trousseau established it upon a firmer basis after the year 1843, although in Germany it was more popular. In England it was discouraged by such authorities as Hope, Stokes, and Watson.

Since this period, in addition to Trousseau in France, Bowditch in America, Stokes of Dublin, and Budd of London have done most to popularize the operation. Conspicuous among these is Dr. Bowditch, of Boston, who up to 1868 had performed the operation one hundred and fifty times on seventy-five persons: *eight* times in six weeks on the same patient, a physician, and *nine* times in eight and a half months on a lady,—beginning when she was pregnant four and a half months, when dyspnœa was threatening death,—and who was delivered at full term, and completely recovered; Dr. Bowditch has consequently come to be regarded as the most eminent American authority on the subject.

But, notwithstanding these results and the comparative frequency of the operation, paracentesis is still too infrequently performed, and I am confident that, if the lives of many are not sacrificed, patients are, at least, unnecessarily made to suffer weeks and even months longer than they should through omission of the operation. Such an omission at the present day can be attributable only to one of *two* causes: 1, an unnecessary timidity, or apprehension that the operation is a serious one; and, 2, a feeling of indifference, based upon an idea that a patient is rarely if ever killed by a thoracic effusion, and that in the course of time the effusion will disappear through the agency of diuretics, or even without any treatment directed especially to the effusion.

That the timidity referred to is not altogether

* Sydenham Society's Translation, vol. iii. p. 208.

without foundation might be inferred from the fact that Laennec himself once transfixed the diaphragm and pierced the liver, and that through the *fifth* intercostal space; while Dr. Watson, of London, once witnessed an operation in which the trocar was pushed through the diaphragm into the spleen, which was unusually large, the patient dying of peritonitis a day or two afterwards. At the same time, I think I can show you that such accidents as these can be avoided, especially with this knowledge that they have occurred previously.

With regard to the second cause of infrequency of the operation, it is erroneous and inexcusable from either point of view; for, in the first place, death from the effects of pleuritic effusion is by no means a rare occurrence,—some striking examples are given by Trousseau,—and, in the second, apart from the risks of tuberculosis and empyema, which are well known to exist during a long-continued pleuritic effusion, we have no right to keep invalid and unemployed for many months a patient whose time and labor may be a means of support to others, to say nothing of his personal discomfort.

And this suggests the circumstances under which the operation may be called for. What are they? These are the chief. First, where in consequence of extreme accumulation of fluid in the chest, whether rapid or slow, there is danger of death from syncope, heart-clot, or asphyxia; the first two from impediments to the circulation, the second from encroachment upon the breathing-space and resulting deficient aeration. These are indicated by extreme weakness, disposition to fainting, great dyspnœa, often amounting to orthopnœa, lividity of the face, and other symptoms of embarrassed breathing, as well as displacement of the heart and the physical signs of effusion. Second, in those extreme or more moderate accumulations of *latent* pleurisy in which, although the above dangers may not be markedly present, the recovery of the patient is likely to be materially retarded by their presence. Among the most common evils which are apt to ensue upon the long-continued presence of a serous chest-effusion is an *empyema*. Almost never is a purulent product the primary result of a pleurisy, except in certain conditions of the system induced by the puerperal state, and the eruptive fevers, especially smallpox and scarlatina, although in children the serous effusion is apt to become purulent at a much earlier date; and in all cases, the longer an effusion lies in a chest the more likely is it to become an *empyema* with its destructive hectic. Such a grave substitution as this we can best prevent by paracentesis, while the presence of an empyema, whether primary or secondary, gives us the third indication for operation. Not that the otherwise invariably fatal termination of an empyema is averted, for the opposite result of the case I show you to-day is an exceptional one; but it at least retards the fatal end, saves the lives of some, and in children a favorable issue is not uncommon. Fourth, with the light modern pathology has shed upon the causation of tuberculosis, long-continued pleuritic effusion being one of the best-established causes, we have in this fact another, which should prompt to a tapping of the chest when serous or purulent fluid is present. Fifth, in the pleuritic effusions which so constantly ensue in the course of valvular disease of the heart and Bright's disease of the kidney, paracentesis may be performed for the relief of dyspnœal discomfort, and to relieve the blood-vessels from that pressure which impedes absorption and prevents the removal of dropsies in other parts of the body.

Finally, paracentesis may even be performed for the great relief of the patient where pneumothorax co-exists with effusion, where the pleura has been perforated by ulceration in phthisis, or even, according to Trousseau, in cancer of the pleura. These are, of course, the most unfavorable cases, and only temporary palliation may be expected from them.

We have next to consider the *site* and *method* of performing the operation. Apart from the fact that circumstances must sometimes modify the selection of the point of puncture, there has been by no means a unanimity of opinion. Other things being equal, sufficient distance from a vital organ, a point which will secure the best drainage, and thinness of the chest-walls are the guides to success.

Trousseau selects the sixth or seventh interspace, nearly four or five centimetres (one and three-fifths to two inches) external to the outer edge of the pectoralis major muscle.

Dr. Bowditch chooses an interspace about an inch and a half above the lowest level at which the respiratory murmur can be heard on the opposite or healthy side. I have myself always, as nearly as possible, taken a point named by Dr. Aitken, between the seventh and eighth, eighth and ninth, or ninth and tenth ribs,—most frequently, perhaps, between the eighth and ninth,—in a line let fall from the inferior angle of the scapula, as giving all the advantages of dependence, thinness of chest-walls, and remoteness from liver or spleen. In all instances, however, the vicinity should be explored by auscultation and percussion, with a view to detecting deviations in the situation and size of these organs. With such precautions I think it almost impossible to make the mistakes already referred to as having been made by Laennec and others.

The patient, if not too feeble, may sit astride a chair, steadying himself by seizing the back, or, if feeble, he may be brought to the edge of the bed, resting in the arms of a friend.

Trousseau insists very strongly upon the skin, at the point to be perforated, being first incised by a lancet or bistoury; but I have never done it, seeing no necessity or even advantage in such a course. Others, again, seek to benumb the sensibility by holding a piece of ice to the part; but I do not think sensibility is practically diminished by such a course. Complete local anæsthesia may, of course, be obtained by throwing the rapidly-evaporating rhigoline against the part by an atomizer; but the advantage derived is more than offset by the alarm which must grow out of so much parade of apparatus and time occupied in preliminaries. I therefore at once perforate, without attempting to induce local anæsthesia. Much of the apprehension which

formerly existed with regard to the access of air to the pleura, and a resulting conversion of a simple serosity into an empyema, is unfounded, so that it is really not necessary to have an air-tight apparatus; at any rate, the operation should not be deferred for the want of one, but an ordinary moderate-sized trocar, such as I show you, and which I have several times used, will answer very well. The point selected, the end of the index-finger is pushed well into the interspace, and the trocar, inclined upwards so as to be turned away from the liver or spleen, is thrust in between the finger and the upper border of the inferior rib. The lower border of the upper rib is avoided, so as to escape the intercostal artery; although there is little danger of wounding it,—Trousseau says it has never happened,—because the vessel is contained in a groove on the inner and under surface of the rib. The operator perceives in a moment when he is within the chest-cavity, in consequence of the diminished resistance, just as we know we are within the bladder in introducing a catheter. The trocar is then withdrawn, and most generally the fluid begins promptly to flow through the canula. Two causes may, however, interfere with immediate success. The most frequent of these occurs where a false membrane of so recent formation exists that it is but slightly adherent to the chest-wall, and consequently is pushed off when the trocar has passed through the muscles. This is more likely to occur when the trocar is timidly or slowly passed than if it is quickly plunged. Should this occur, the membrane may be generally broken or torn by passing a probe through the canula and moving it about. Sometimes, it is said, it may be necessary to withdraw the canula and perforate in another spot; but I have never met the accident, even in its less serious degree.

Another cause of deficient flow is occasionally found in a circumscribed or sacculated pleurisy, where, in consequence of partitions of false membrane, the pleural cavity is divided into more or less perfect compartments, which usually, however, communicate with one another. These may drain slowly, and finally the flow may cease altogether before the chest-cavity is empty. It is recommended to attempt to break up these partitions by suitable blunt-pointed instruments or probes.

Another cause of delayed flow mentioned by Trousseau is an indisposition on the part of the patient to use the corresponding lung in breathing, either from habit or a nervous condition. This effect is combated by asking the patient to cough or to strain as at stool; but the former request soon becomes unnecessary, as an irresistible disposition to cough very soon presents itself, and often becomes very annoying, continuing long after the operation is completed. It is, no doubt, due to the irritating influence of the inspired air, to which the compressed lung has long been unaccustomed. Extreme pain is also sometimes experienced from the same cause. Both may be controlled by the use of an opiate immediately after the operation,—a hypodermic injection of morphia affording the most convenient and reliable mode of exhibition.

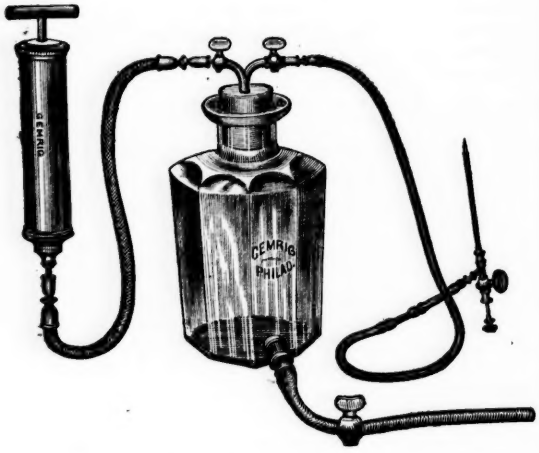
But although an ordinary trocar and canula are sufficient for the operation of paracentesis, yet, in view of the greater facilities afforded by special instruments for thoroughly emptying the chest, as well as the fact that there is some risk of converting a serosity into a purulent fluid by the access of air, it is well to use some form of the so-called aspirators now used for this purpose, and for emptying other cavities where it is desirable to prevent the access of air or to avoid extensive incision. Trousseau always operated with a trocar and canula, to which a piece of gold-beater's skin or similar substance was attached, so that when wet it fell over the opening of the canula, and, acting like a valve, allowed the fluid to flow out, but prevented the air from entering.

The best of the early modern instruments devised for this purpose was the so-called Bowditch's apparatus, originally made for him by Codman & Shortleff, of Boston. It consists of a moderate-sized trocar, with a canula capable of being attached by an intermediate tube to a syringe provided with a stop-cock so arranged that when open it permits the suction of fluid from the chest, while a second opening communicating with the exterior is closed. When the syringe is filled, the opening communicating with the chest is closed, and on pushing in the piston the fluid is forced out through a second tube, the end of which may be submerged, if desired, in a vessel of water provided for this purpose. Then this opening is closed, and the syringe again filled from the chest, and emptied as is shown. The apparatus is a good one of its kind, and, except that the barrel of the syringe is metallic and therefore not transparent, it appears to me as good as the more recent apparatus of Dieulafoy next shown, and now well known as the aspirator. It was devised, as is well known, for draining fluids without access of air, by fine perforated canulæ, from any deep-seated situation, as a renal abscess or the bladder. The principle is identical with that of Bowditch's apparatus, but the fine canulæ are commonly used, and the barrel of the syringe, being of glass, permits the fluid to be examined through it.

It is a matter of extreme difficulty, however, to get a glass cylinder which is perfect, and much care must be exercised in selecting an instrument. Further, both of the above instruments are very apt to get out of order, and it is almost indispensable, in order to be sure of their successful operation, to have them overhauled by the instrument-maker immediately before using. Finally, the muscular effort required in their use is considerable, and if the quantity of fluid to be evacuated is large, considerable fatigue ensues.

Neither of these objections can be made to the next instrument I show you,—the aspirator of Potain, and made by Gemrig of this city,—which is by far the best yet introduced. The perforating apparatus is similar, but the exhausting apparatus consists of a bottle,—any wine- or beer-bottle will answer,—which receives a rubber stopper communicating on the one side with the fluid-cavity, and on the other with an air-pump syringe, from either of which it is capable of being cut off by a stop-cock.

When the bottle is exhausted by the air-pump, the proper attachments are made, and the chest perforated; the communication with the chest is then opened, and the fluid flows rapidly into the bottle, even through the needle or exploring canula,—so



rapidly, indeed, that I have never had occasion to substitute a larger canula for this exploring one. When the vacuum seems nearly filled, the air-pump is again brought into requisition, and when full the bottle is emptied, the communication with the chest being cut off by the proper stop-cock; after which the attachment is again made, the bottle emptied of air, and the fluid allowed to run until the receiver is full. As a receiver of large capacity may thus be used, it is evident that the effort required to empty a chest of many ounces is comparatively trifling.

A very convenient apparatus for simple exploratory purposes is the ordinary glass barrelled hypodermic syringe, by which a small quantity of fluid may be drawn from the chest and examined without danger of entrance of air.

(To be continued.)

RUPTURE OF EXTERNAL ILIAC ARTERY—DEATH ON TWELFTH DAY FROM INTERNAL HEMORRHAGE.

Read before the Pathological Society of Philadelphia, June 24, 1875,

BY JOHN ASHHURST, JR., M.D.,

Surgeon to the Episcopal Hospital, etc.

A. R., an engineer, 39 years of age, and a native of this country, applied for admission to the Episcopal Hospital on June 15, 1875, saying that one week before he had, in trying to board a railway-train, slipped and fallen backwards, striking a rail of the adjoining track, and receiving a severe blow in the region of the lumbar spine. But slight inconvenience from the injury was experienced at the time, but the next morning the patient felt stiff, and had a good deal of pain in his back,—these symptoms becoming more, rather than less, marked during the following days, though even when admitted to the hospital he walked without difficulty, and considered himself, and was considered, to be suffering merely from a contusion or sprain of the lumbar muscles.

This was on Tuesday. On the following day the patient was in much the same condition, and gave no evidence of having received any serious injury. His bowels were moved by a mild laxative.

On Thursday, June 17, I found the patient in a cold sweat, and then learned that a similar "sinking spell" had occurred on the preceding day, but had passed off in a short time, and had been, apparently, of a trivial character. The patient now complained of pain in the left side as well as in the back, but there was no great tenderness manifested on palpation, and nothing was discovered to throw any further light on the case. The left common femoral artery was observed to be pulsating with great force, but the pulsation was not expansile in character, and a slight fulness which existed below Poupart's ligament was evidently due to an enlargement of several lymphatic glands. There was no abnormal pulsation nor tumor in the course of the iliac artery.

On Friday, June 18, the patient was almost in a state of collapse, bathed in a profuse cold sweat, with rapid respiration, and with a pulse running at the rate of 120 or more beats in the minute; he had more pain, still referred to the back and left flank (rather in the hypochondriac than in the iliac region), and vomited a little after taking food, though his diet was limited to milk, mixed with lime-water, and a moderate amount of stimulus. There was no tympanites and no general abdominal tenderness, and the tongue was, as it had been throughout, moist and clean. The pulsation in the common femoral artery was now rather feeble; but there was, on the other hand, a marked pulsation in the epigastric region, perceptible both to sight and to touch; auscultation, moreover, revealed a bruit, not, however, of a very decided character, and not propagated for any great distance along the course of the aorta. There was no bruit in the iliac region. Careful palpation failed to discover a tumor in any part of the abdomen, though there was a slight fulness in the left flank, such as is sometimes observed at an early stage of psoas abscess.

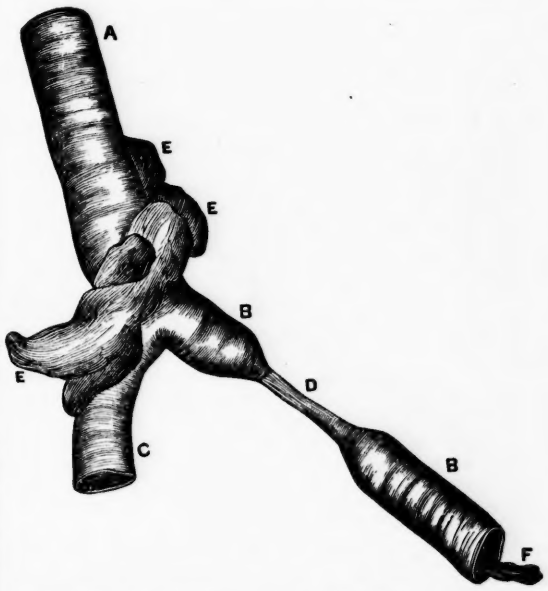
As elucidated by the results of the post-mortem examination, the signification of the various symptoms now seems plain enough; but at the time I confess that I felt some hesitation in making up my mind as to the precise nature of the injury. Three conditions presented themselves to my consideration as possibly present,—viz., internal strangulation, latent peritonitis, and internal hemorrhage. The supposition that strangulation existed was negatived by the state of the patient's tongue, and by the absence of constipation; the same circumstances, together with the total absence of febrile excitement, contradicted the notion of peritonitis; and by a process of exclusion, therefore, I was led to think that the symptoms observed were due to internal bleeding. The source of the hemorrhage was next to be considered. The constant pain in the left

flank suggested the existence of rupture of either the spleen or the left kidney; but a careful examination of the patient's urine, made by my very competent house-surgeon, Dr. Rudderow, failed to detect the presence of either blood or albumen, and I could hardly believe that a splenic rupture, of sufficient gravity to prove fatal, could have existed more than a week without giving evidence of its presence. I had, indeed, seen lacerations of the spleen which produced no symptoms during life, and which were only discovered after the death of the patient from other causes; but a rupture so extensive as to endanger life by hemorrhage would certainly have proved fatal at an earlier period. Here, again, then, by a process of exclusion, I was led to believe that the patient was bleeding from a large artery, which had undergone partial rupture at the time of the original injury, and that the efforts of nature to repair the lesion, though temporarily successful, had ultimately allowed the occurrence of profuse hemorrhage. Thus far my opinion was proved correct by the results of the autopsy, but I was misled—and, I think, naturally misled—by the absence of pulsation or bruit in the iliac region, and by the presence of both in the epigastrium, to infer that the injured vessel was either the aorta itself, or one of its large abdominal branches.

On Saturday, June 19, I found the patient almost moribund. There was now a good deal of tympanites, but no general abdominal tenderness; the patient's tongue was still clean and moist; vomiting had ceased, and the administration of a simple enema had produced three copious fecal evacuations. That which the day before was only a fulness in the left flank, now appeared to form an elongated tumor; but the tension of the abdominal muscles on this side was so great that in the patient's prostrated condition no accurate examination was possible. The left-sided pain and tenderness were still increased, and to my former diagnosis of internal hemorrhage I now added that of localized peritonitis. The patient died a few hours after my last visit.

A post-mortem examination was made the next day by Dr. T. H. Andrews, one of the coroner's physicians. On laying open the abdomen, recent peritoneal adhesions were found upon the left side, and beneath the peritoneum was found an enormous clot filling the left vertebral gutter from the pelvis to the diaphragm, and above turning inwards and compressing the aorta. The clot having been removed, the source of bleeding was found in a rupture of the left external iliac artery, about half an inch below the bifurcation of the common trunk; both ends of the torn vessel were retracted, though held together by a portion of the external coat of the artery, and the distal end was partially occupied by a well-formed coagulum. The abdominal viscera, as far as examined, presented a normal appearance.

The symptoms presented in this case were now readily explained. An incomplete rupture of the external iliac artery no doubt occurred at the time of the patient's injury, but either the external coat of the vessel remained intact, or, if it was involved in the rupture, a clot was formed, and the bleeding was temporarily arrested. Hemorrhage began or recurred on the eighth or ninth day, and on account of the anatomical relations of the vessel, bound



A, common iliac artery; B, external do.; C, internal do.; D, position of rupture; E, clot overlying common trunk; F, clot protruding from distal end of external iliac artery.

down as it was by the iliac fascia, the blood found its way upwards, dissecting up the peritoneum, and finally impinging upon the aorta, thus by pressure producing the pulsation and bruit which misled me as to the situation of the lesion. The femoral pulsation noted on June 17 showed that at that time blood was passing freely through the injured vessel, and was no doubt the forcible pulsation often observed in the arteries of a part from which secondary hemorrhage has occurred or is about to occur. As the bleeding went on, the clot formed about the injured artery exercised a certain amount of compression, and the violence of the pulsation was diminished. With the consequent enlargement of the coagulum, the peritoneum was more and more separated from its attachments, giving rise to steadily increasing pain, and ultimately leading to localized peritoneal inflammation. The arterial rupture was too extensive to permit the formation of a traumatic aneurism, and when secondary hemorrhage occurred the patient literally bled to death.

I have said nothing as to the treatment adopted in the above case, for, in the absence of any certain knowledge as to the nature of the injury, it was, of necessity, purely empirical, and directed to the relief of symptoms; and though it may have prolonged life for a few hours, it of course exercised no influence for either good or evil, as regards the ultimate termination of the case. Had it been possible during life to determine the exact source of bleeding, the propriety of attempting the application of ligatures to the injured vessel would have had to be considered.

NOTES OF HOSPITAL PRACTICE.

ST. BARTHOLOMEW'S HOSPITAL, LONDON.

SERVICE OF MR. CALLENDER.

Reported by JOHN B. ROBERTS, M.D.

OPERATION FOR THE RELIEF OF STRANGULATED FEMORAL HERNIA.

AN elderly woman was admitted, who had had a hernia for many years, and who said that it had always been possible to push the bowel back. On closer examination, however, it was evident that she had never been able to replace it entirely, and that a portion of the protruded abdominal contents always remained external to the opening in the parietes, constituting, therefore, an incompletely reducible hernia. Three days before her admission the tumor became larger, and thus attracted the patient's attention; it could not be pushed back as usual, and soon became somewhat painful, though not especially so.

On examination, quite a large tumor was seen at the upper part of the thigh and in the right groin, extending from the external femoral ring upwards and outwards over Poupart's ligament, but its position was such as to render the diagnosis between femoral and inguinal hernia easy, since it did not extend towards the labium. The superior spinous process of the ilium, which was readily found, although the patient was fat, gave the direction of Poupart's ligament, and thus afforded a guide to the character of the hernia; the pushing upwards of the tumor being probably due to the mass of veins emptying into the saphena and femoral veins at this point. There was little or no resonance on percussion, the tumor did not have an impulse when the woman coughed, and she had neither vomited nor even felt nauseated; but the tumor felt tender, her bowels had not been opened for several days, and her tongue was coated quite heavily. Taxis had been attempted by a surgeon outside, who, being unsuccessful, had advised her removal to the hospital.

Although the symptoms were not very urgent, an operation was indicated, because it was evident that the strangulation, if not relieved, would lead to mortification, and therefore, as the life of the patient was jeopardized, it was deemed proper to use the knife. The woman was etherized, and a last attempt at taxis made under the relaxing influence of the anæsthetic; but, this proving unsuccessful, the operation was begun. A vertical incision, two and a half inches long, was made over the most prominent portion of the tumor, cutting from without inward, and not by transfixing, as is sometimes done. When the sac was reached, an endeavor was made to replace the mass, sac included, into the cavity of the abdomen; but the many adhesions rendered this impossible, and therefore the bands of fibrous tissue were torn by the finger, or, when they were very firm, divided with the knife.

As it was impossible to force the mass back through the opening in the abdominal parietes, the sac formed of the parietal peritoneum was slit open on a director, whereupon a small amount of serum escaped. It then became evident that the hernia was an epiplocele, for there could not be found a single coil of intestine protruding; whence the negative character of the symptoms presented by the patient when first examined. The constriction exerted by Gimbernat's ligament was relieved by introducing a narrow knife into the wound and cutting the edge of the ligament, after which procedure the protruded omentum was replaced without difficulty. This is a very delicate step in the operation, on account of the occasional abnormal distribution of the arteries, which must, therefore, be remembered in all cases.

A tent was introduced into the wound, to facilitate drainage, the carbolized oil dressing was applied, without any sutures being used, and the administration of an opiate was ordered.

[One week subsequent to the operation the patient was doing well, and everything seemed to point towards a favorable issue of the case.]

ST. THOMAS'S HOSPITAL.

SERVICE OF MR. SYDNEY JONES.

SUBCUTANEOUS DIVISION OF THE NECK OF THE FEMUR IN A CASE OF BONY ANCHYLOSIS OF THE HIP-JOINT.

THIS man presents a remarkable deformity, resulting from an attack of what was called rheumatic fever, though more likely pyæmia, from which he suffered about six years ago. When he was admitted to the wards there was anchylosis of both hips and also of both knees, so that he could only take exercise by using two crutches. The anchylosis of the knee-joints has been overcome by breaking up the adhesions by powerful passive motion, but it was found impossible to rupture the osseous union between the head of the femur and the ilium on either side; so that it has been determined to attempt, on the right side, the formation of a false joint by sawing through the neck of the thigh-bone. The femurs are abducted and rotated outwards, so that when the patient stands his feet are widely separated, and he assumes a semi-stooping posture. This terrible deformity is a warning to the surgeon to take the precaution to keep the limbs in a proper position in every case where there is danger of anchylosis occurring.

The operation of division of the neck of the femur for treating bony anchylosis of the hip was first done here by Mr. Adams, and, as in the present instance there is not the least movement possible, it seems a proper case for the employment of this operative interference. The operation will probably be an easy one, since there has most likely been no destruction of the head or neck of the femur, and the anatomical relation of the parts has, therefore, been preserved: it may, however, be necessary to divide also the tensor vaginæ and rectus femoris muscles, which during the long period may have assumed a condition of spastic contraction.

The outline of the femur is first sketched on the skin in ink, and then a small puncture is made, and a tenotomy-knife introduced half an inch above and a little in front of the great trochanter, thus clearing the anterior surface of the neck. The soft tissues are divided thoroughly with the knife, which, as it is withdrawn, is made to enlarge slightly the cutaneous orifice, in order to allow free play for the saw, and thus prevent the occurrence of a ragged wound externally. The next step is to introduce along the track of the knife a narrow saw, which is passed flatwise, and then turned with its cutting edge against the bone with great care, lest the instrument snap and a fragment be left in the wound. The saw is now in position, and its extremity felt in the tissues by the left hand of the surgeon placed upon the upper part of the thigh; it is carefully moved back and forth until the neck of the femur is sawn entirely through, when it is withdrawn, and the thigh forcibly twisted into a much better position. As the bone was being sawn, the end of the instrument was felt to impinge against some hard substance, which was most probably the lesser trochanter.

The flow of blood, though quite considerable, is not at all abundant; but a pad shall be placed over the femoral artery just below Poupart's ligament, and con-

fined by adhesive strips, in order to cut off the supply to the smaller vessels that have been wounded. After a piece of oiled lint has been placed upon the wound, the entire limb is surrounded by a bandage.

The anchylosis having existed for six years, the muscles have accommodated themselves to the deformity, and will, therefore, tend to draw the femur into its old position: hence it is necessary to apply a splint along the outside of the leg, from the ankle upwards, to retain the limb in its present improved position. The splint is composed of two sections,—one long piece extending from the foot to a point just below the hip, and a second from above the joint along the trunk; these sections are connected by a curved rod of iron, for the object of the splint is, since we are aiming at the production of the false joint, not to keep the sawn ends immovable, as in a fracture, but to prevent the turning outwards of the limb by those muscles that have an origin from the pelvis.

The operation thus performed is not at all difficult, and seems to promise a certain amount of improvement of the deformity, which for six years has rendered the patient a helpless cripple.

TRANSLATIONS.

INFLUENCE OF THE NERVOUS SYSTEM UPON THE PHENOMENA OF PREGNANCY AND PARTURITION (Prof. Goltz and Dr. A. Freusberg: *Archiv für Phys.*, ix., 1874).—"On the 17th of December, 1873, a section of the spinal cord of a bitch nine months of age was made, and on the 28th the left sciatic nerve was also divided. From May, 1874, the animal was perfectly well, with the exception of the paralysis, was intelligent, and gained in weight, although it was proved with certainty that no transmission of nervous force took place along the cord. About the end of May the bitch became pregnant, and on the 10th of August gave birth to a strong living pup, which she cleaned by licking and then ate the placenta. A second and a third pup, both of which were dead, were afterwards taken from her, and by her treated in the same way as the first, which was born alive. During labor rhythmical flexion and extension of the hind legs were observed, and these evidently occurred in connection with labor-pains. By the touch contraction of the inner muscular tissues of the pelvis could be noted, but the vagina itself remained uncontracted. After delivery the bitch refused food, and died on the 12th of the month from peritonitis, consequent upon a perforation of the vagina. The body was examined after death, and the cut ends of the cord found to be one centimetre apart, the lower isolated portion of the cord being of normal size."

Fritsch (*Jahrbücher*, 1875), remarking upon this, says that as the ovaries were intact in this case it is conceivable that the animal should go into heat. During this time she treated the dog which she had previously driven from her in a friendly manner, but this disposition would not have been seen had the ovaries been extirpated. The condition of the brain must therefore be affected by the presence or absence of the ovary, and in this case, as the spinal cord was cut in the lumbar region, if these impressions were conveyed by this route, the sympathetic fibres must have joined the cord above that region. It appears more probable that while animals are in heat characteristic matters enter the blood, and thus act upon the brain. There is nothing strange in the idea of impregnation without sensation, since women will conceive when stunned. The development of distant organs is often dependent upon the presence of the essential parts of the genital organs. Körner has asserted that the motor fibres of the uterus have their origin from the cord about the last dorsal vertebra, and run downwards along the aorta, and these fibres would not have been injured in this experiment. But it is not probable that the entire act of parturition is dependent upon the brain, as other fibres have their origin about the third and fourth lumbar vertebræ. Moreover, in this case the external muscles took part, and this could not have been due to impulses from the brain, but must depend upon a nervous centre in the lumbar region of the spinal cord. This centre may perhaps extend over the entire cord, so that when this is cut both portions may have power to act as long as the nerve-fibres which convey impulses outward from it exist. In the case of a primipara, aged twenty-four, in whom, in the sixth or seventh month of pregnancy, the third and fourth cervical vertebræ were fractured, there was entire paralysis of sensation and motion below the seat of the injury, but still labor-pains occurred, which were not felt by her, but were powerful enough to cause the birth of a dead child. The phenomena of this case would also tend to prove the existence of an independent centre in the cord. W. A.

DIPHTHERIA OF A VACCINATION PUSTULE FOLLOWED BY GENERAL DIPHTHERIA (Dr. Ludwig Letzerich: *Virchow's Archiv*, B. lxiii.).—The patient in this case was a child aged four months, which, until vaccination, had been perfectly healthy. On the thirteenth day after this operation was performed, an erysipelatous swelling developed itself about the wound, and spread with great rapidity over the entire body. Œdema soon appeared, followed by icterus and petechial exudations, and death took place on the twelfth day of the disease, the twenty-fifth from the day on which vaccination was performed. At the post-mortem examination lesions characteristic of diphtheria were found, and the question arose whether the lymph which had been used had been the conveyer of the disease, or whether the diphtheria had been contracted at the wound, but at a later period. The fact that diphtheria in such cases makes its appearance some days after vaccination has been performed would seem to indicate that it is not inoculated with the lymph; but, to make this point more clear, experimental inoculations on animals were made. From these the following conclusions were drawn:

1. Vaccine which is infected with the organisms which are characteristic of diphtheria is not capable of causing vaccine pustules.

2. The inoculation of lymph which contains such organisms is rapidly followed by local deposits and general diphtheria.

And these experiments show especially:

1. That the lymph which was used in this case was not thus contaminated, or there would not have been a development of a vaccine pustule at the proper time.

2. That the local diphtheritic changes, followed by the disease itself, must be regarded as processes of secondary character. W. A.

DIABETES.—A complete cure of this affection is related in the *Bahia Medical Gazette*, by means of phenic acid, two and a half grains night and morning, in a vehicle of mint-water. The patient, a teacher of music, had been struck from his saddle by a falling tree. Trommer's test had shown a very large amount of glucose or grape sugar in the urine.—*The Doctor*, Aug. 1.

PHOTOGRAPHY IN MEDICINE (*The Lancet*, August, 1875).—Dr. Ultzman asserts that an eruption of small-pox had been made evident by photography twenty-four hours before it actually came out. Nothing could be seen on the face of the patient, but the negative plate showed stains in the face which perfectly resembled the variolous exanthem.

PHILADELPHIA
MEDICAL TIMES.
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MEDICAL AND SURGICAL SCIENCE.

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EDITORIAL.

A DANIEL COME TO JUDGMENT.

A CASE has recently been decided in London which is of enough general interest to make it worthy of brief recapitulation. The operation of tracheotomy was performed on a little boy who was lying at the point of death from diphtheritic croup and laryngeal obstruction. Owing to the professional duties of both the attending physician and the operator, they were unable to remain continually with the patient: so, as it was foreseen that in the course of the case there would be difficulty in keeping the artificial opening clear, the services of a physician who lived near were obtained. This gentleman, with his brother, a qualified practitioner, was in constant attendance for one hundred and thirty-two hours, during which time the tracheal tube became repeatedly blocked by secretion, and the child on several occasions narrowly escaped suffocation, and was once brought back to life by artificial respiration, the natural breathing having entirely stopped. The case terminated in complete recovery, and an account was sent in at the rate of five guineas for every twenty-four hours of attendance. This was objected to, and was at once reduced to three guineas; but payment was still refused, no pretence being made, however, that the child's parents were unable to pay the sum demanded. The matter was taken to court, and was decided in favor of the physician, who obtained judgment for the full amount.

The *Lancet* looks upon this case as one of considerable importance, as affording a decision in which what may be called the minimum fee for constant day and night attendance by a medical practitioner may be based.

It alludes in very complimentary terms to the summing up of the judge, who spoke of the difficulties of carrying out the details of treatment in a terribly infectious disease for one hundred and thirty-two hours, seeing at the same time the peril of the patient, and hearing and sharing the anxieties of parents and friends.

He also told the jury that "in a judgment such as was before them, they must take into consideration not merely the time of the service rendered, but the importance of the service. He had calculated that for the duties performed the sum of two shillings and seven-pence per hour had been charged, and that a surgeon working night and day at this rate, in ordinary practice, would not earn more than a thousand a year; and it could hardly be expected that, for a service so purely exceptional as had here been rendered, a less than ordinary fee should be demanded."

Verily,

"Truth from his lips prevailed with double sway."

WE are glad to see, in the shape of a letter from Dr. William Pepper, a denial of the report which was published in some of the papers, to the effect that on the occasion of the accident at the Frankford Arsenal the physicians at the University Hospital had withheld their services until they had telegraphed to know whether they would be paid for them. Dr. Pepper states that they went at once to the scene of the accident, and that "the question as to payment was asked in a moment of hurried interview with the messenger, solely in regard to *the means of transportation*, by the senior resident surgeon of the hospital, a gentleman from Mobile, who was perfectly ignorant whether Bridesburg was five or fifty miles away." To those who are acquainted with the gentlemen in question this explanation is unnecessary; but we reprint it for the benefit of those members of the profession who may have seen the first report and not have noticed its contradiction.

ERGOT IN THE TREATMENT OF INSANITY (*The Medical Record*, June 26, 1875).—Dr. Edward C. Mann reports several cases of maniacal disease in which the free exhibition of ergot produced either a decided amelioration or a positive cure. He believes with Dr. Browne that it is eminently useful in recurrent mania, chronic mania with lucid intervals, and epileptic mania, and that its good effect is due to its power of re-establishing the equilibrium of the intra-cranial circulation which has been temporarily disturbed.

LEADING ARTICLES.

MASSAGE.

MASSAGE, or, in plain English, shampooing, has long been a recognized procedure in medical treatment, though until lately it has seldom been employed in a careful or systematic manner. The quacks, "bone-setters," "rubbers," and the like, have enjoyed nearly a monopoly of the practice until recently, when the subject has been brought once more to the notice of the profession in a series of able articles in various foreign journals.

It is the aim of the present communication to give, in a succinct form, some account of the various methods of employing massage, the diseases in which it has been found most efficacious, and the different modifications of the procedure most applicable to each class of affections. The writer is indebted for most of the facts embodied in this article to an admirable résumé of the recent literature of the subject by W. Berger.*

The various manipulations included under the term "massage" (from μασσω, to knead) comprise stroking or friction (streichen, effleurage); rubbing (reiben, massage à friction); kneading (kneten, pétrisage); percussion (schlagen, klopfen, tapotement). Any of these may be employed separately, or several in conjunction.

The first, stroking, is performed by passing the hand gently and slowly over the surface desired to be acted upon, the flattened palm pressing against the skin, and the motion being in a direction from periphery to centre,—that is, in the direction of the venous and lymphatic currents.

Rubbing is a form of massage more frequently employed than stroking: it is similar in every respect, excepting that the movements are more vigorous and are not confined to a single direction. Previous to rubbing, all hairs should be removed from the part to be operated upon, lest irritation and the formation of acute pustules should result, which, of course, would put an end to massage for the time being. Fat or oil is sometimes used with advantage in rubbing, and the fingers should be made to follow all the inequalities of the surface, being employed with an amount of force considerably greater than that used in stroking. Rubbing should be practised with both hands simultaneously; one may be moved in a horizontal or circular direction, while the other is impelled vertically. Perfect quiescence of the part operated upon is not necessary, nor even desirable.

Kneading is performed by seizing the part in the hand, raising it from the subjacent tissues, rubbing, rolling, or kneading it between the palms, or moving it to and fro on the parts beneath. These movements are to be alternated at times with brisk friction of the surface.

Under favorable circumstances, massage should be practised twice daily, with an interval of three to four hours between the manipulations. More frequent use of the method is sometimes advisable, but is prevented by want of time. The length of time occupied by each "sitting" may vary from six to ten minutes on an average.

Massage, when used for the first time in a case, may give rise to more or less pain, which, however, ceases with the completion of the sitting. The feeling ordinarily experienced is that of general warmth, pliability, and invigoration of the part operated upon occasionally; while the skin is reddened, its temperature increased, and occasionally blue, green, or yellow discoloration is noticed. This discoloration does not in any way affect the progress of the case, and, in fact, disappears after repeated manipulations.

Among the advantages claimed for massage are these: it promotes absorption of effused material, accelerates the circulation, assuages pain, and reduces temperature.

The rationale of its effect in these directions may be explained, at least in part, as follows. Stroking and rubbing from the periphery towards the centre lead to a direct pressure upon the interstitial lymph-canals, and thus aid in carrying away the products of effusion. In addition, an increase in the rapidity of the vascular current is gained, and the rubbing excites the nerves (at least at first) in such a way as to cause contraction of the blood-vessels themselves. When the inflammatory process has gone a step farther, and stasis exists to a certain degree in the arteries, the stroking movement first arrests the flow for a moment and sends the arterial current backward, while accelerating that in the veins. Then, when this momentary pressure is removed, the vessels are filled again, the blood moved by *vis a tergo* overcomes the stasis, and the circulation becomes more active. Towards the end of the sitting a certain amount of hyperæmia of the vessels in the manipulated parts of course occurs. This, however, never amounts to actual stasis, since exit is made easy through the thoroughly emptied capillaries and veins, the muscular movements usually made by the patient after the manipulation aiding directly in promoting absorption. A more active circulation being now established in the whole vascular region, the capacity of the capillaries is increased, and absorption is also aided by diffusion. Massage also brings about absorption by its direct influence upon the lymphatics and capillaries: the swelling in the affected part goes down, the sensory nerves are freed from the tension and pressure to which they had been subjected, their irritability is abated by further manipulation, and the temperature of the locality operated upon is lowered.

In chronic inflammations, particularly in and about the joints, vigorous circular rubbing comes into play in addition to that from periphery to centre. This crushes the newly-formed blood-vessels in the hyperplastic tissues. The fluid portions of the extravasation being drained away by the pressed-out veins and lymphatics, the more solid portions deprived of nourishment proceed to retrograde metamorphosis, and are also gradually absorbed. The characteristic fungous granula-

* Schmidt's Jahrbücher, Bd. clxvi., 1875, p. 158.

tions of chronic joint-inflammation are removed in a similar manner. Thus the active circulation kept up not only by frequently-repeated manipulation but also by active muscular movements aids directly in causing absorption of effused material.

The various manipulations of massage act directly upon the nerves, causing at first increased sensibility, later diminishing this so that it may act in allaying morbidly increased irritability of the nerves.

The various manipulations connected with the procedure under consideration act directly upon the muscles. For the excitation of contractions in paretic or paralyzed muscles stroking and percussion are important means, and kneading has been proved to act powerfully in increasing the vitality of paralyzed and atrophied muscles.

The indications for massage are found principally in those conditions of disease in which hyperæmia, extravasations, exudations, hyperplasiæ, condensation and thickening of the tissues, or adherences between sinews and their sheaths, exist. Especially is massage indicated when the products of inflammation are such as may enter the circulation without prejudice.

In diseases of the joints, it is particularly useful in the acute and chronic forms of synovitis, inflammations and extravasations in the neighborhood of joints and contractions, so long as these do not depend upon bony anchylosis. Among diseases of the muscles, it is particularly indicated in inflammations and rheumatic affections.

Among nervous affections, it is particularly indicated in neuralgias and paralyses of peripheral origin; in these massage has been proved most useful.

Massage has been used in dyspepsia to give tone to the muscular walls of the stomach, and to increase its secretion. It has also been employed with success in skin-diseases, accompanied by exudation and thickening of the corium, and finally in the formation of abscesses and mastitis.

Massage offers no prospect of success when the pathologico-anatomical nature of the morbid change itself places an invincible hindrance to the attainment of a favorite result. Thus, in diseases of the joints involving the bones or cartilages, primarily or secondarily; in ostitis, osteomyelitis, or arthritis deformans; in the later stages of anchylosis with enlargement of the bones or organized connective-tissue growth; in disease of the joints with fractures, either extending into the articular cavity itself or in its immediate neighborhood, and in affections of the joints attended with suppuration, it is naturally contra-indicated. Further, in advanced muscular atrophy of central origin, in neuralgias of central origin or dependent upon constitutional causes, nothing can be done by local treatment.

The general condition also may contra-indicate massage under certain circumstances; in many complicated acute and chronic diseases an improvement of the general condition must first be awaited before massage can be employed.

The indications for the use of the several manipulations are different according to the method of action of the latter.

Stroking aids in the removal of lymph and inflammatory products by the vascular system. It is, therefore, useful in acute cases; for instance, in acute synovitis with recent inflammation of the soft parts, especially if these are red, swollen, hot, and sensitive. Occasionally in using stroking it may be necessary to continue the manipulation one-half to one hour, though a shorter time suffices in most cases. Under the influence of the operation, the pain usually diminishes, and the swelling and heat subside. In chronic cases demanding the more violent use of other manipulations, stroking may be employed towards the end of the sitting to guard against the swelling so apt to follow a severe rubbing.

By means of rubbing, newly-formed vessels are crushed and the tissues placed in a position to react actively, the circulation aroused, and absorption aided. It is principally indicated in chronic synovitis and perisynovitis, effusion into the sheaths of the tendons, chronic infiltration of the muscles, and similar affections.

Kneading is to be employed in inflammatory swelling of the muscles, in chronic muscular rheumatism, in "ischias," where the muscles in the neighborhood of the nerve are often affected; also in fatigue of the muscles, in order to avoid the occurrence of myositis.

Percussion is used at times for the purpose of exciting nervous action, at other times with a view to allaying it. In neuralgias this form of massage may be employed with the aid of a percussion-hammer of rubber or ivory.

It is easily understood that the particular kind of massage to be used in one case or in one class of cases may be quite different from that which would be appropriate under other circumstances. Thus, in articular affections the lighter methods are to be used when the trouble is a superficial one, the more forcible methods when, as in hip-joint inflammation, the disease is deeply seated.

The soft tissues about the diseased joint in articular affections must also come in for their share of manipulation, for by this means the neighboring vessels will be influenced, partly in a direct manner as heretofore described, partly in an indirect manner through the vaso-motor nerves.

In the treatment of articular affections massage is superior as an instrument of resorption to the bandage, for the latter compresses the subcutaneous veins, causing stasis and even œdema, while massage does not allow of stasis. It was formerly believed that massage could only be used in chronic articular affections; but it is now known that the milder methods may be used to advantage even in acute cases.

Massage has been found useful in acute and chronic synovitis serosa, and in perisynovitis. In the hyperplastic forms of synovitis it is to be used in a more forcible manner, particularly when the perisynovial parts are much thickened.

In these cases the rationale is, according to Kiör, as

follows. The newly-formed connective tissue changes into cicatricial tissue; by the contraction of the latter the lumina of the newly-formed blood-vessels are closed, their walls become atrophied, the more remote vessels are more or less emptied of their contents and their elastic walls contracted. At the same time, by continued manipulation the thinner blood-vessels are crushed. Of course, manipulation so rough as to produce this effect involves a certain amount of acute inflammation and exudation, but the latter is rapidly absorbed, while the torn vessels become atrophied. It is understood that in manipulations of this kind care must be taken not to excite too much inflammation. This may be avoided by only operating upon a portion of the diseased structure at any one sitting.

In synovitis pannosa massage has proved useful, and also in chronic, and even acute, articular rheumatism. Of course, in the earlier stages of the latter, massage will do no good, but in a later stage, when the trouble really seems a local one, gentle rubbing and manipulation have frequently proved of the utmost service.

In affections of the muscular system, myositis, rheumatism, and inflammation of the sheaths of the tendons, massage is highly spoken of by various writers. In writer's cramp it has been used in connection with injections of strychnia; but the good effect in these cases was in all probability due to the latter.

In various affections of the nerves, neuralgias, and particularly ischias, where tumor or degeneration is not the cause, massage produces the happiest effect. It is in the latter class of cases that kneading and percussion are particularly useful. In certain peripheral paralyses massage has often acted very favorably, and in these cases, also, percussion is the preferable form.

In telangeiectasis Metzger has used massage with good effect. The method of its employment is as follows. A finger of one hand is laid upon the efferent vein, thus causing the capillaries of the affected part to become filled with blood. These are then suddenly squeezed together with considerable force, with the effect of rupturing some of the capillary walls. The process is repeated at subsequent sittings, proceeding from the periphery towards the centre. The rupture of the capillaries thus brought about results in extravasation of blood, and subsequently in insignificant inflammation. The extravasation disappears spontaneously, but its recession may be hastened by rubbing in the direction of the lymphatic current. The inflammation is not likely to be serious if only a portion of the growth is operated upon at a time.

Metzger has used massage to prevent the formation of abscesses, and this method has also been employed in mastitis, in bony tumors, in corneal exudations, and leukoma. It has been suggested in affections of the uterus.

What the actual value of massage as a remedial agency may be it is difficult as yet to say, but in the hands of qualified persons it undoubtedly must prove a valuable adjuvant in many cases of chronic and intractable disease. It should, however, be taken entirely out of the regions of charlatanism, and intrusted only to those educated to use it rightly. There is a certain amount of physiological and anatomical knowledge necessary for the employment of the method, but not more than can be acquired by a skilful and intelligent nurse; and it is to be hoped that in time the ability to perform massage will be one of the recognized accomplishments of a properly-educated attendant upon the sick.

CORRESPONDENCE.

NEW YORK, August 7, 1875.

THE following case of *atresia vaginæ* completes our record of Prof. Thomas's recent operations at the Woman's Hospital. The patient was a lady twenty-two years of age, who was well developed, but had never menstruated. She said that when she was fourteen she began to have pains in the back and in the lower part of the abdomen regularly once a month. This continued for about ten months, when it ceased, but was succeeded by a feeling of faintness, sometimes accompanied by headache, which still recurs pretty regularly every month. On examination of the vulva there was no appearance whatever of anything like a vagina. Before proceeding to operate, Dr. Thomas pointed out the danger of endometritis or peritonitis being occasioned by the sudden evacuation of menstrual blood which has been for a long time imprisoned in the uterus or its appendages.

The uterus and Fallopian tubes are sometimes distended so greatly by this fluid, and thereby rendered so acutely sensitive, that the admission of air may produce dangerous or even fatal septicæmia. At the same time, he spoke of the danger of delaying operative interference during the period of menstrual activity, in consequence of which lives have not infrequently been destroyed by rupture of the Fallopian tubes, and even of the uterus itself, from distention by menstrual blood. In one instance of atresia he had seen a hæmatocele the size of an infant's head result from regurgitation of blood through the tubes into the peritoneal cavity. Should these accidents not occur, the retention of the menstrual flow is likely to occasion grave nervous and cerebral symptoms.

In the operation for atresia vaginæ, Dr. Thomas now entirely discards the knife, scissors, and all other cutting instruments, except in its very first stage. He uses the scissors simply to clip out a small portion of mucous membrane at the point where the mouth of the vagina ought to be, and for the rest of the operation pursues Graily Hewitt's plan of using the finger exclusively. He has found this method infinitely less troublesome and tedious, as well as less dangerous, than the old procedure of dividing the tissues with the scalpel or scissors. An assistant holds a sound in the bladder, and the operator keeps the forefinger of his other hand in the rectum. It is simply a matter of tearing through the connective tissue which separates the bladder from the

rectum, and there is but little danger, if proper care is observed, of perforating with the finger either the bladder in front, the rectum behind, or the peritoneum above.

When Dr. Thomas was in the habit of employing the knife and scissors in this operation, he cut through into Douglas's cul-de-sac on one occasion, but no bad results followed,—which seemed to confirm the observations of Carl Braun, of Vienna, who now considers it a very trifling accident when he takes out a piece of the peritoneum in amputating the cervix and in other operations. In the course of a few minutes Dr. Thomas had worked his finger up to its whole length in the newly-made vaginal canal, but now, when this was accomplished, he was not able to detect the slightest trace of either uterus or ovaries. In this connection it may be well to state that previous to the operation she had been thoroughly examined by the rectal touch, according to the method of Simond, and this had also proved negative in its results. Still, as Dr. Thomas remarked, a vagina will be a convenient thing for the patient to have in case she should ever marry. Before she was removed from the table, a vaginal dilator, such as Sims recommends in cases of vaginismus, was inserted.

This consists simply of a glass plug three inches long, slightly conical, open at one end and closed at the other, and about an inch in diameter. It is to be retained in position by a T-bandage, and will have to be worn for a considerable period.

The New York Diet Kitchen Society have published their second annual report for the year ending March 31, 1875. The objects of the Association are now well understood and appreciated by the charitable public. They are all practical, originating in the conception that food properly prepared is, in many cases, the best medicine, acting both as curative and preventive of the worst form of disease and contagion among the poor. The first kitchen, on Second Avenue, working in the Demilt Dispensary District, has for nearly two years answered all the requirements made by the physicians of the Dispensary upon it.

In a letter to the managers, Dr. Edward Darken, house-physician to the Demilt, says, "The working of the Diet Kitchen in this district has been most satisfactory (indeed, I have been surprised at the promptness with which demands upon the kitchen have been always met by your efficient matron), and the good done has been very great. You are to be congratulated upon the fact that you and all donors of time and money towards this object have the best possible evidence that all your beneficiaries are deserving." The managers truly say that they need no greater encouragement in their work or more eloquent argument to enlist benevolence; for when to poverty sickness is added, there is seen the strongest appeal that human suffering and helplessness can make to charity. Many of the expenses incidental to starting the machinery of a new effort were not repeated in their second year, nor will the same outlay be necessary in the establishment of other kitchens, all centring about the parent kitchen, and dependent upon it in many respects. No false economy, however, has been practised in the selection of the food-material. The very best has always been purchased, and a skilful cook employed for its proper preparation; so that it passes into the hands of the physicians an ally to their medicines that can be depended upon. The amount of food prepared and supplied varies, of course, with the season of the year and the prevalence of disease; but the calls upon the kitchen have more than doubled since the last year's report, the average daily number of patients during the winter being thirty. The managers report that with the surplus in the treasury, and the assistance of seven hundred and fifty dollars received from the Board of Apportionment, they felt able to spread their good work and establish a second kitchen. The Northwestern Dispensary District was chosen as the one representing the interests of the west side of the city, and on March 19 the new kitchen, under the charge of its Directress, Mrs. Wm. H. Wickham (wife of the Mayor), was opened at 438 West Thirty-Sixth Street.

The managers further express the hope that with each recurring annual report they will be able to announce the opening of at least one more kitchen, until there shall be no dispensary district in the city where this efficient aid to its beneficent work shall be wanting. From their present experience they believe that the total annual expense of maintaining kitchens throughout the city in accordance with the original plan of Dr. C. H. Atwater, who devised the scheme on which the Society was established, will not exceed fifteen hundred dollars for each kitchen, or for the whole city not more than twelve thousand dollars.

Owing to the bitterness of the past winter, and the increasing number of patients to be visited, it was found that the ladies of the Visiting Committee were unable to perform that work without aid, and a competent person for the purpose was employed to assist them, at a very trifling monthly expense to the Society.

A sewing society, also organized among the ladies to provide flannels and other articles of clothing for the patients of the kitchen, has provided such garments as have been needed in cases of destitute sickness. In concluding their report, the managers say, "What can more loudly appeal to benevolence, and even to selfishness, than such an institution as this? For it is largely by the aid of the filthy and insufficient food which poverty provides, and by which nature is disabled, that disease is all-powerful to hold such an undisputed course in our crowded streets and to become such a fearful scourge to our great city. And now and then an ungentle reminder for charity is sent out of the narrow streets into the broad avenues, as scarlet fever and diphtheria emerge from the places where they have been nourished into epidemics, and demand at our own doors a ransom that would have been gladly redeemed a thousand times by the 'cup of cold water,' or, in the diet expression, the bowl of beef-tea, by which their ravages might have been checked at the outset."

The Directors of the Demilt District Kitchen re-

port the number of patients during the year 466, and the various articles were dispensed in the following quantities: milk, 7606 pints; beef-tea, 3317 pints; rice, 423½ pounds (cooked); oat-meal, 305 pints (cooked); farina, 18 pounds (cooked); barley, 13½ pints (cooked); hominy, 10½ ounces (cooked); eggs, 256; milk-punch, 126 ounces; brandy, 46 ounces; soup, 48 pints.

The elegant new floating hospital of St. John's Guild made its trial trip on the 19th of July, with a number of invited guests on board. It is the largest barge ever seen in the waters of New York, and is two hundred and fifteen feet long, with forty feet breadth of beam, and ten feet depth of hold. It has three decks, of which the upper is a grand promenade-deck (covered), of almost the entire length and width of the vessel, where the patients have the full benefit of the sea-breeze, there being nothing in any part to intercept its current. The main deck contains two wards, each forty feet in length, and a spacious reception-room for those in charge of the sick. In the hold, which is admirably lighted and ventilated, is a dining-room where one thousand mothers and children can eat at the same time. There are also a convenient kitchen, store-rooms, ice-house, closets, etc., so that the whole is admirably adapted for its purposes.

The cost of the vessel was about twenty thousand dollars; more than one-half of which has already been paid. On the evening of the 20th a grand moonlight excursion was given by the St. John's Guild on the new barge, and a handsome addition is said to have been made to the floating hospital fund by the proceeds. The first regular trip of the season with the sick children on board was made on the following Tuesday, and since then trips are made on Tuesday, Thursday, and Saturday of each week. The boat starts from the foot of Twenty-Third Street, East River, at 8 o'clock A.M., and, after making a number of landings, finally leaves the foot of Thirty-Fourth Street, North River, at 9 o'clock, returning in time to make its last landing by 6 o'clock P.M.

The tickets for these excursions are given out by the members of St. John's Guild and by physicians generally at the various dispensaries and hospitals; and each mother is allowed to take all her children, whether sick or not, who are under eight years of age. Medical attendance is afforded by a number of physicians, who volunteer their services as occasion requires, Dr. William Thurman being the chief medical adviser.

As the sale of Paris green is now very general, and suicide by the swallowing of this material has become alarmingly frequent, the Board of Health has passed the following resolution:

"That the Sanitary Superintendent be and he is hereby directed to enforce Section 15 of the Sanitary Code, and to cause a printed notice of the same, and of the State law with regard to the sale of poisons, to be served upon all persons who keep this and other poisonous materials for sale."

The section referred to prohibits the sale of Paris green except under the regulations enforced against all druggists as to the sale of prussic acid, arsenic, and other poisons, and its enforcement will prevent its being sold carelessly in paint-shops, etc., in the future.

The American Otological Society and the American Ophthalmological Society both held their annual meetings at Newport in the latter part of July, and the members thus had an opportunity of enjoying the pleasures of that charming seaside resort, as well as of contributing to the advancement of their respective sciences. Among those present were Drs. Strawbridge, Barker, and William Thomson, of Philadelphia; Blake, Dix, and J. Orne Green, of Boston; and Agnew, Knapp, Noyes, Matthewson, Prout, Thomas R. Pooley, O. D. Pomeroy, Roosa, Sexton, and A. H. Buck, of New York and Brooklyn.

Among the more important papers read before the Otological Society were, "Intra-tympanic Pressure," by Dr. Buck; "Otitis Media Hæmorrhagica," by Dr. Pomeroy; "Angioma of the Auricle," by Dr. Kipp; and "Experiments on the Effects of Quinine on the Ear," by Dr. Roosa. The Society originated at Newport in 1867, and now numbers about sixty members.

Probably the most interesting case reported at the Ophthalmological Society was one of Dr. Knapp's, in which he removed a tumor of the optic nerve (scirrhus), involving its whole intra-orbital tract, without ablation of the eyeball. It is believed that this is the first time that this operation has been performed; and one of the principal points of interest in connection with it is the demonstration to how great an extent the optic nerve and muscles of the eye will admit of being stretched. Before the operation the tumor occasioned very great pain and deformity, forcing the ball forward and downward; but the patient is now in excellent health, and there is no evidence of any return of the disease or of cancerous deposit in any other part of the body. This Society was organized eleven years ago, in New York, the late Prof. Delafield being its originator, and now has about seventy members in different parts of the country, selected from those of the profession specially interested in ophthalmic science and art. PERTINAX.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JUNE 24, 1875.

THE PRESIDENT, DR. WM. PEPPER, in the chair.

DR. EDWARD L. PARKS presented, for Dr. F. F. MAURY, the following specimens, and read their histories:

"*Larynx of a man strangled with a piece of meat, together with the bolus.*

"P. M., about 50 years of age, after a hurried dinner, seated himself in an eating-saloon. Soon violent symptoms of strangulation followed, which failed to dislodge the foreign body, and in about five or ten minutes he died.

"The notes of the examination are, 'External ap-

pearances normal, except a slight scratch over left eye. Slight post-mortem discoloration. Pupils natural.'

"The trachea and larynx being removed, a large bolus of meat, weighing about ʒiv to ʒvi, was found impacted in the larynx."

"*Punctured wound of chest-wall, with incised wound of aorta.*

"F. R. was stabbed in the back with a long, pointed knife. He fell upon the floor, blood poured plentifully from the wound, and in a very short time, probably not more than three minutes, he was dead. There is no history of a stab elsewhere, though another was found after death.

"The notes of the examination are,—

"'Post-mortem discoloration on the posterior portion of the body. A wound was seen two inches above the inferior angle of the left scapula, and two and a half inches from the median line. This wound was three-fourths of an inch in length, and ran obliquely downwards and outwards. On removing the flap of skin covering this part of the body, a large coagulum was observed lying between the skin and underlying tissues. The wound in this position was one inch long, and one-half inch from the spine, and penetrated the chest between the seventh and eighth ribs. The lower border of the seventh rib was sharp, caused by contact of the wounding instrument. On the anterior left aspect of the body, about six inches above the anterior superior spinous process of the ilium, and between the tenth and eleventh ribs, a wound was found, extending obliquely downwards and inwards. On removing the flap of skin covering this portion of the body, the external wound was found to correspond to a point immediately above the tenth rib, and about four inches from its anterior free margin. It had no connection with the thoracic or abdominal cavities. Had this wound penetrated deeper it would have passed into the abdominal cavity under the diaphragm.

"'There was an escape of bloody serum from the mouth, but no marks of violence about the head.

"'Pupils somewhat dilated, balls of eyes normal.

"'Firm pleural adhesions over both lungs, of old standing. Lung-substance normal. The left pleural cavity contained a clot, as well as some fluid blood.

"'Pericardium firmly adherent to the heart. Heart normal.

"'An incised wound was found to sever almost the half of the ascending arch of the aorta, in a line directly opposite the seventh and eighth ribs, and opposite the external wound on the posterior left lateral part of the body, as before described.'

"*Fracture of the cranium.*

"T. W., 37 years old, born in Scotland, was brought, intoxicated, to the Philadelphia Hospital the 2d day of last May. When seen by the resident physician at 2.30 in the afternoon, he was asleep, and was not aroused. When seen again in the evening of the same day, he was still unconscious. Pulse 84, pupils slightly contracted. 'He appeared,' writes the resident physician, 'like one who had been drinking to excess and engaged in a drunken brawl.'

"He remained unconscious till the evening of the next day (May 3), when he gave his name, complained of headache, and answered some questions intelligently, though he could not tell how he had been hurt. There was much tenderness over the whole surface of the head. Pupils continued contracted, as they had been since his admission. There was an effusion of blood into both eyes, around the orbits, and over the right mastoid process.

"In the afternoon of Tuesday, 4th, he began to relapse into unconsciousness.

"Wednesday, 5th, he was quite conscious, and complained of a severe headache.

"Thursday, 6th, he complained of severe pain, radiating from the temples over the forehead. His mind was clear, and he had perfect use of all his limbs. His pulse had been gradually falling since his admission, and on the evening of this day was 54 beats a minute; respiration, 18; temperature, 98°.

"Friday, 7th, morning, his hands and feet were cold, pulse 50, and there was slight ptosis. Great restlessness during the day. In the forenoon he lost control of his sphincters. In the afternoon he became quite unconscious. At noon his temperature was 100°; at 7 o'clock in the evening his temperature was 102°, pulse 98, respiration 26, with complete loss of motion and sensation.

"He died at 8.30 P.M., five days after admission.

"When first seen, he was ordered fifteen grains of blue mass. Subsequently, blood was twice taken by cups from the back of the neck and from the temples, with marked relief each time. Blisters and ice were also used.

"At the coroner's inquest, it was ascertained that he was pushed violently backwards from the door of a drinking-saloon, and fell, striking his head against the pavement.

"From the notes of the post-mortem examination we select the following:

"'On removal of scalp, crown was seen to be discolored by blood. Temporal fascia of left side was injected, also the whole posterior aspect between scalp and pericardium.

"'A fracture was seen, which commenced at centre of skull, above the external occipital protuberance, and passed irregularly but directly to right side of skull, ending at junction of squamous portion of temporal bone. There was a free escape of bloody serum before removing the skull-cap. After removal of skull-cap, the fracture was found to traverse the skull from the inferior angle of the parietal bone of one side to that of the other. The length of the fracture, by actual measurement, was twelve inches.

"'Brain was injected, and clots found in its substance, and a large coagulum was found in the anterior portion of the cranial cavity. A clot on the left side was very adherent, and was semi-organized.

"'The ventricles were normal. There were evidences of softening around the seat of injury; also a large abscess on left side.

"'Cerebellum normal.

"'Cause of death, fracture of skull, as described, followed by an effusion of blood into the cranial cavity.'

"This case is valuable for several reasons: the length of the fracture, and the symmetry of the injuries to each parietal bone. Though strongly suspected, the fracture was not distinctly recognized during the life of the patient. Nor should we expect otherwise, since the clear-cut edges were held in close apposition by the scalp, occipito-frontalis muscle, temporal fascia, and periosteum, aiding the natural position of the bones. No crepitus, preternatural mobility, or deformity was to be found to point out that there was a fracture."

Gunshot wound of the eye—Excision of the eyeball.

Dr. JOHN ASHHURST, JR., exhibited an eyeball, removed a few hours before from a colored man, 38 years of age, who entered the Episcopal Hospital on May 30, 1875, suffering from a gunshot wound of the left upper eyelid and eye. Vision being lost, and the eye manifestly disorganized and moreover very painful, excision was resorted to.

The specimen was referred to Dr. W. F. Norris, as a special committee.

Dr. ASHHURST also exhibited a specimen of *rupture of the external iliac artery*, and read a history of the case, which is published in the current number of the *Times*.

Fibroid tumor of the uterus.

Dr. JAMES TYSON presented the specimen, for Dr. FRANCIS L. HAYNES, who furnished the following history:

"Mary M., aged 32, was treated for uterine disease in 1873, at the University Dispensary; among other means, sponge tents were employed. Receiving no benefit, she discontinued treatment for a time, and finally came under the charge of Dr. H. in October, 1873. A subperitoneal fibroid was detected by bimanual palpation. Under the internal administration of fluid extract of ergot, the flooding (which was her principal symptom) rapidly diminished, and in a short time she considered herself well. Examination revealed no change in the fibroid.

"The patient was now lost sight of until June 5, 1875, when Dr. H. was called to attend her, and found her in a collapsed condition, and suffering from intense abdominal pain, with constant vomiting. A strangulated inguinal hernia was discovered. She had been treated for 'cramps' by a homœopathic physician for eighteen hours previously. The hernia was reduced, and one-half grain of morphia given hypodermically. The vomiting and pain immediately ceased, but the patient never reacted, and died after twenty-four hours' illness.

"On post-mortem examination, the intestines were intensely congested, and presented a pinched appearance at one point, showing the site of the hernia. About four ounces of bloody serum were found in the pelvic cavity, with other evidences of local peritonitis. The fibroid tumor had evidently increased in size since 1873. The right Fallopian tube was dilated at its extremity, where it presented a small opening, from which was issuing a fluid of a tarry appearance.

"It was impossible to learn the immediate previous history of the patient; but it was known that she was menstruating at the time of her death."

GLEANINGS FROM OUR EXCHANGES.

A SPEEDY METHOD IN ASPHYXIA (*The Medical Record*, July 31, 1875).—Dr. Harvey L. Byrd believes that the following method will be found a highly valuable addition to our list of remedies in the asphyxia of children, and also for the relief of that condition in the adult, when properly applied:

Bring the *ulnar* sides of the hands near together, with the palmar surfaces locking vertically, and place them beneath the back of the infant, so that the extended thumbs may aid, as far as possible, in sustaining the vertex and inferior extremities; then, keeping the *ulnar borders* near together so as to form a fulcrum, the radial borders or sides are simultaneously depressed to as great an extent as practicable—say forty-five degrees—*below* the horizontal line, and then gradually pronated or elevated to as many degrees *above* that line, thus facilitating the escape of air drawn into the lungs during the downward movement of the head and chest. Or the hands are placed as at first, and passed *beneath* the body of the child,—on its back; and the superior and inferior extremities farthest from the operator seized, one by each hand, near the trunk,—the *ulnar borders* of the hands and wrists forming the fulcrum,—the head of the child being kept at a proper axis with the movements of the chest by the hands of an assistant, and the depression and elevation of the head and lower extremities proceeded with as already described. These alternate depressions and elevations of the two extremities, performed in a regular and gentle manner, and repeated at proper intervals, seldom fail in establishing respiration where it is possible of accomplishment. The occasional dashing of cold water on the epigastrium during the *descent* of the head and chest will hasten respiration where the first few movements fail in its establishment. It is important that the head be kept, as far as practicable, from too much *lateral* movement, and not permitted to depart considerably from its *antero-posterior* axis with the vertebral column during the continuance of the process. To this end, in a critical case, the hands of an assistant may be brought into requisition. The importance of these remarks will be apparent to intelligent readers on a moment's reflection. No impediment should be *permitted* in the way of *free entrance* of air into the lungs during the *downward* movement of the head. And it is scarcely less important that no obstruction should prevent the *escape* of air during the *upward* movement of the head and chest.

LOCALIZATION OF FUNCTIONS IN THE BRAIN (*The Boston Medical and Surgical Journal*, July 29, 1875).—In a recent lecture, Dr. Brown-Séquard alluded to the various theories in the localization of functions in the brain, and to the fact that the character of the symptoms in brain-diseases is not in the least dependent upon the seat of the lesion, so that a lesion of the same part may produce a great variety of symptoms, while, on the other hand, the same symptoms may be due to the most various causes,—various not only as regards the kind but also the seat of the organic alteration. In view of these facts, he has been led to believe that lesions of the brain produce symptoms not by destroying the function of the part where they exist, but by exerting over distant parts either an inhibitory or an exciting influence, or, in other words, either by stopping an activity or by setting it in play. He concluded that if we survey all the facts brought forward to support the supposition that there are distinct psycho-motor centres in the brain, belonging to each set of muscles performing a distinct kind of movement, we find that it is impossible to admit that these centres occupy a separate, well-defined, and limited territory in some of the convolutions of the anterior and middle lobes of that organ; and we find also that the supposition that the nerve-cells endowed with each of the primary functions of the brain are disseminated through that organ, so that no local lesion or irritation can reach more than a part of those endowed with the same function or the same kind of activity, is supported by most of the known facts and out of harmony with none.

ABSCESS OF THE LIVER (*New York Medical Journal*, August, 1875).—Dr. S. W. Dana read before the Academy of Medicine the case of a man, æt. 52, who complained of severe pain over the region of the stomach, which was accompanied with vomiting. This improved for a time, but returned with greater severity. The case showed the marked influence of malarial poison, being characterized by chills every alternate day. Jaundice followed this malarial seizure, and was accompanied by an increase of pain over the liver. Physical examination showed the hepatic dulness to extend two inches below the level of the ribs. After this the patient began to improve, and the jaundice materially lessened, though the chills continued. He, however, afterwards relapsed and died. A few months before his death a tumor was detected below the ribs, which, as proved by the autopsy, was due to the formation of an abscess. When the post-mortem examination was made, the liver was found adherent to the abdominal parietes. Its lower margin extended two inches

below the margin of the ribs, but it was smaller than normal. The right lobe contained an abscess two and one-half inches in diameter, and one-half inch deep. The spleen and other lobes of the liver were normal. The points of interest in the case are mostly involved in obscurity. The cause of the abscess was unknown. There was nothing to show that disease existed in the intestines, and there was no history of injury to the liver.

SPINA BIFIDA SUCCESSFULLY TREATED BY PUNCTURE AND INJECTION (*The Indian Medical Gazette*, June 1, 1875).—Mr. G. W. Eate reports the case of an infant aged one month, the subject of spina bifida. Its general health was very poor, the lower limbs were paralyzed, and the tumor, the size of a large orange, and situated in the lumbar region, was ulcerated on its summit, and was extremely sensitive.

Pressure having been made on the tumor in the direction of the median line, and the space where the spinous processes of the vertebræ were wanting discovered, a trocar and canula were carefully introduced into the most depending position, and a quantity of clear fluid drawn off. The removal of this fluid was followed by collapse of the tumor. Into the sac, which, however, was not thoroughly emptied, two drachms of a solution of iodine (iodine, ten grains; iodide of potassium, thirty grains; glycerine, one ounce) were injected with an ordinary syringe, the solution being diffused throughout the sac by gentle manipulation; the canula having been withdrawn, the opening was closed by a strip of adhesive plaster, and a light compress of lint applied over the tumor.

The operation was well borne, and not a single bad symptom resulted from it. The tumor gradually diminished, until it is now about the size of a walnut. The child recovered with its general health greatly improved, with no pain in what remains of the tumor, and with some indications of strength in the lower limbs.

ARNICA IN ORCHITIS (*The British Medical Journal*, July 17, 1875).—Mr. H. G. Knaggs reports a method of treating orchitis, which, he says, he has for many years found very effective. It consists in the more or less constant application, while the patient is resting, of a lotion of tincture of arnica and water (one part of the former to six of the latter) to the affected organ; secondly, in rubbing in an embrocation composed of one-third or even one-half tincture of arnica and soap-liniment two or three times a day along the course of the spermatic cord; and thirdly, in the internal administration of seven-drop doses of tincture of arnica, combined, when there is febrile disturbance, with two-and-a-half-drop doses of Fleming's tincture of aconite and acetate of ammonia. This simple treatment, he says, generally cures the patient in a fortnight or less. In using our remedial agents of the above-named strength, there is little danger of causing cutaneous irritation; but it must be admitted that, while some skins will bear the constant application of even pure tincture of arnica for a considerable time, there are others which are inconceivably sensitive to the action of the drug. We must, therefore, be on the watch for any show of erysipelatoid inflammation, in case such should occur.

QUINIA AS A STIMULANT TO THE PREGNANT UTERUS (*The Obstetrical Journal*, June, 1875).—Dr. Albert H. Smith sums up as follows the conclusions which he has adopted as regards the action of quinia upon the pregnant uterus:

1. Quinia has no inherent property of stimulating the gravid uterus to contraction, being inert as to any effect upon the womb in a quiescent state, and having no decided action in accidental labors at any period of gestation.

2. To its property as a general stimulant and promoter of vital energy and functional activity, and to that alone, is due its influence upon the uterus in normal parturition, producing then no action peculiar to itself, but merely increasing the power of the uterus to expel its contents by its own natural method, converting what is a defective or even pathological action into a simple physiological process.

3. By availing ourselves of this power we may, by administering full doses of the sulphate of quinia at the onset of labor, favor the rapid and safe termination of what might otherwise be a tedious and exhausting work.

THE CHEAPER CINCHONA ALKALOIDS (*The Chicago Medical Journal*).—Dr. James S. Whitmire has for several years been employing in his practice the sulphates of cinchonia, quinidia, and cinchonidia, and even the residue—chinoidine. Cinchonia he has found unsuitable for use as an antiperiodic or antipyretic, because of its tendency to nauseate the stomach; but in smaller doses, in connection with the tincture of iron, he has found it useful as a general tonic. Forty grains of quinidia seemed to be equivalent to about twenty-five of quinine.

Dr. Whitmire is disposed to attribute to cinchonidia very nearly, if not quite, an equal therapeutic value with that of quinia, and in about the same doses, while its commercial value is only one-third that of the latter. Chinoidine he employs as a powder in three- to four-grain doses, after each meal, alternating it with Fowler's solution, and he has been very successful through its means in preventing the recurrence of intermittents.

SALICYLIC ACID IN DIPHTHERIA (*The Virginia Medical Monthly*, August, 1875).—Dr. Fontheim has treated with salicylic acid thirty-one patients having diphtheria. The severest cases were cured after eight days' treatment; the milder ones after two, three, and four days. Of the thirty-one cases, none died. There occurred no cases of diphtheritic inflammation of the kidneys, nor were there any cases of paralysis of the palate. In the severe cases, Dr. F. ordered the affected parts to be rubbed every three hours with a sponge dipped in a solution of salicylic acid, and to take as regularly a teaspoonful of the same solution. The formula used was: ℞ Salicylic acid, 2 grammes (about ʒss); fountain water, 200 grammes (about ʒvij); alcohol, q. s. (to make fʒvij). Salicylic acid passes rapidly into the urine, and gives with chloride of iron a blue or violet reaction.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 10, 1875, TO AUGUST 16, 1875, INCLUSIVE.

BACHE, DALLAS, SURGEON.—Leave of absence extended one month. S. O. 45, Headquarters of the Army, August 10, 1875.

FORWOOD, W. H., ASSISTANT-SURGEON.—Granted leave of absence for one month, S. O. 155, Department of Texas, August 6, 1875; and leave extended two months. S. O. 46, Headquarters of the Army, August 12, 1875.

TAYLOR, B. D., ASSISTANT-SURGEON.—Assigned to duty at Fort Snelling, Minnesota. S. O. 149, Department of Dakota, August 5, 1875.

NEWLANDS, W. L., ASSISTANT-SURGEON.—Assigned to duty at Camp Halleck, Nevada. S. O. 87, Department of California, August 6, 1875.

TESSON, L. S., ASSISTANT-SURGEON.—Assigned to duty at the Military Prison, Fort Leavenworth, Kansas. S. O. 143, Department of the Missouri, August 9, 1875.

The following-named Assistant-Surgeons (recently appointed) are ordered to report by letter to the Commanding Generals of the Departments named, for assignment to duty:

CURTIS E. PRICE, Department of California.
H. S. TURRILL, Department of Texas.
JOS. Y. PORTER, Department of the Gulf.
GEO. E. LORD, Department of Dakota.
S. O. 163, A. G. O., August 12, 1875.